

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1-6. (Canceled)

7. (Currently Amended) A method for inspecting a sample having a plurality of chips having essentially the same pattern, comprising:

capturing an image of the sample;

extracting defect candidates from the captured image by comparing the captured image with a pre-stored reference image and producing a differential image from the captured image and the reference image;

classifying the extracted defect candidates into groups; and

identifying, for each of the classified divided groups, genuine defects from the defect candidates by using criteria corresponding to the groups;

wherein in the step of classifying, each group including defect candidate which are disposed at corresponding identical locations or adjacent locations on the different a plurality of sample regions which are disposed at corresponding identical locations or adjacent locations on different product units when overlapping said differential image overlapped with differential images of the different sample regions each other.

8. (Canceled)

9. (Previously Presented) The method for inspecting a sample according to claim 7, wherein classifying the extracted defect candidates into groups comprises capturing the sample images and extracting the defect candidates of the plurality of sample regions on the sample, by using data constituting an aggregate of results of observing the defects candidates in the plurality of chips on the sample.

10. (Previously Presented) The method for inspecting a sample according to claim 7, wherein identifying genuine defects from the defect candidates comprises determining the criteria corresponding to the groups by using information on feature amounts of the defect candidates belonging to the separate groups.

11. (Previously Presented) The method for inspecting a sample according to claim 10, wherein identifying genuine defects from the defect candidates comprises:

forming an aggregate of the feature amounts of the defect candidates in the plurality of sample regions in the sample, for each of the groups of defect candidates; and

comparing the feature amounts of the defect candidates belonging to each group with a distribution of the aggregate of the feature amounts for the group of defect candidates.

12. (Previously Presented) The method for inspecting a sample according to claim 10, wherein the feature amounts of each defect candidate comprise at least one of: inspection signal average value, inspection signal scattering data, reference signal average value, reference signal scattering data, brightness differential average value, brightness differential scatter data, detected coordinates position, and defect elliptical approximation size.

13. (Previously Presented) The method for inspecting a sample according to claim 7, further comprising classifying the genuine defects into different types of genuine defects.

14. (Previously Presented) The method for inspecting a sample according to claim 13, further comprising displaying the genuine defects and defect candidates.

15. (Previously Presented) The method for inspecting a sample according to claim 7, further comprising revising the criteria used to identify genuine defects from the defect candidates; and then identifying, for each of the divided groups, genuine defects from the defect candidates by using the revised criteria.

16. (Previously Presented) The method of inspecting a sample according to claim 15, further comprising displaying results of the identifying.

17. (Currently Amended) A method for inspecting a sample, comprising:
capturing an image of a sample, wherein the specimen comprises a plurality of
chips formed thereon, each chip having essentially the same pattern;
generating a differential image by comparing the captured image with a pre-stored
reference image;
overlapping plural differential images generated by repeating the steps of
capturing and generating, and forming an overlapped differential image;
extracting a plurality of defect candidates from the generated overlapped
differential image by using a first threshold value;
grouping adjacent defect candidates among the plurality of defect candidates
appearing in the overlapped differential image formed at the step of overlapping extracted
into separate groups; and
identifying genuine defects from among the defect candidates of each of the
groups,
wherein in the step of grouping, each group including defect candidates which are
disposed at corresponding identical locations or adjacent locations on the different chips on the
sample when overlapped differential image with each other.

18. (Previously Presented) The method for inspecting a sample according to claim 17,
wherein grouping adjacent defect candidates comprises grouping defect candidates that are
adjacent to defect candidates having identical or similar feature amounts among the extracted
plurality of defect candidates.

19. (Previously Presented) The method for inspecting a sample according to claim 17,
wherein identifying genuine defects comprises determining criteria corresponding to the groups
by using information on feature amounts of the defect candidates belonging to the separate
groups.

20. (Previously Presented) The method for inspecting a sample according to claim 19, wherein the feature amounts of each defect candidate comprise at least one of: inspection signal average value, inspection signal scattering data, reference signal average value, reference signal scattering data, brightness differential average value, brightness differential scatter data, detected coordinates position, and defect elliptical approximation size.

21-33. (Canceled)

34. (Currently Amended) An apparatus for inspecting a sample, comprising:
an image capturing unit which captures an image of a sample, wherein the specimen comprises a plurality of chips formed thereon, each chip having essentially the same pattern;
a defect candidate extracting unit which extracts defect candidates from the image captured by the image capturing unit by comparing the captured image with a pre-stored reference image and producing a differential image from the captured image and the reference image;
a classifying unit which classifies the defect candidates extracted by the defect candidate extracting unit into groups; and
a genuine defect identifying unit which identifies, for each of the groups classified by the classifying unit, genuine defects from the defect candidates by using criteria corresponding to the groups,
wherein the classifying unit classifies the defect candidates into groups for each group includes defect candidates which are disposed at corresponding identical locations identical locations or adjacent locations on the different chips when overlapping said differential image with differential images of the different chips each other.

35. (Previously Presented) The apparatus for inspecting a sample according to claim 34, wherein the genuine defect identifying unit identifies genuine defects from the defect candidates by determining the criteria corresponding to the groups by using information on feature amounts of the defect candidates belonging to the separate groups.

36. (Previously Presented) The apparatus for inspecting a sample according to claim 34, wherein the genuine defect identifying unit further classifies the genuine defects into different types of genuine defects.

37. (Previously Presented) The apparatus for inspecting a sample according to claim 34, further comprising a display unit for displaying the genuine defects identified by the genuine defect identifying unit and defect candidates defect candidate extracted by the extracting unit.

38. (Currently Amended) An apparatus for inspecting a sample, comprising:
an image capturing unit which captures an image of a sample, wherein the specimen comprises a plurality of chips formed thereon, each chip having essentially the same pattern;

a differential image generating unit which generates a differential image by comparing the captured image with a pre-stored reference image;

differential image overlapping unit which overlaps plural differential images generated by the differential image generating unit and generates an overlapped differential image;

a defect candidate extracting unit which extracts a plurality of defect candidates from the overlapped differential image generated by the differential image overlapping generating unit by using a first threshold value;

a grouping unit which groups adjacent defect candidates among the plurality of defect candidates extracted from the overlapped differential image by the defect candidate extracting unit into separate groups; and

a genuine defect identifying unit which identifies genuine defects from among the defect candidates of each of the groups grouped by the grouping unit;

wherein the grouping unit groups the defect candidates into groups for each group includes defect candidates which are disposed at corresponding identical locations or adjacent locations on the overlapped differential image different chips when overlapping with each other.

39. (Previously Presented) The apparatus for inspecting a sample according to claim 38, wherein the grouping unit groups the defect candidates into groups that are adjacent to defect candidates having identical or similar feature amounts among the extracted plurality of defect candidates.

40. (Previously Presented) The apparatus for inspecting a sample according to claim 38, wherein genuine defect identifying unit identifies genuine defects by determining criteria corresponding to the groups by using information on feature amounts of the defect candidates belonging to the separate groups.

41-42. (Canceled)